PHILADELPHIA, JANUARY 6, 1877.

ORIGINAL COMMUNICATIONS.

ON THE DANGER ATTENDING THE USE OF OPIUM IN BRIGHT'S DISEASE, ILLUSTRATED BY A CASE OF OPIUM-POISONING.

BY W. W. KEEN, M.D.,

Philadelphia.

THE following is, I believe, the first case in medical jurisprudence involving the question of the danger of opium in Bright's disease, and the consequent differential diagnosis of opium-poisoning and uræmia, and is so emphatic a confirmation of the reality of this danger that it seems to me particularly worthy of publication.

Mr. J. M. C., a stout and apparently robust, healthy man, about forty-five or fifty years of age, spent the evening of June 26, 1876, at a ball with Mrs. Bella McClain, a fortune-teller by profession. After indulging in some drinking (but not probably to any extreme degree) and also in some venereal excesses, he went to her room in the "Fish House," at Fortieth and Elm Avenue, at about 1 A.M., June 27, not in an intoxicated condition. The next time he was seen was about 4.30 A.M., when he came to the bar, apparently stupid, but able to walk. When asked for his watch he felt for it, but mumbled out that it was gone. Soon after, while trying to put on his shoes, he fell over unconscious. Dr. Wm. H. Hawkes was called to see him about eight o'clock, and found him unconscious, livid, breathing nine times in the minute, pupils greatly contracted and immobile, pulse about 100. He diagnosed narcotic poisoning, injected one-sixtieth grain of atropia, and applied mustard, but found it impossible by any of the ordinary means to arouse him in the least. He sent for me, and I reached there at a little before 10 A.M. I found him lying flat on a lounge, his face very livid, especially at the lips and ears; respirations 12, and slightly stertorous; pulse 104; pupils contracted, and, separately tested, each insensible to light. He was utterly unconscious, and could not be aroused by any means, nor could he walk or sit. His breath smelt somewhat of liquor, but not of laudanum. The history of the woman, who had drugged other men, both in Boston and here, and who was a chronic morphia-taker, ostensibly for stricture of the rectum, made it probable that she had administered a comparatively small dose of morphia (and facts subsequently discovered made it probable that it was from gr. ss to ij) for the purpose of drugging and then robbing him. This, too, was confirmed by the fact that so small a dose as one-sixtieth grain of atropia had dilated his pupils to a slight but an appreciable extent, and also had increased his respirations from nine to twelve. In view of the time that had elapsed since taking the morphia (probably six hours or more, when it would all be absorbed), that he was unable to swallow, and was so visibly improving, I did not try to give him any emetic, nor did I think it needful to obtain a stomach-pump, which would at that distance have required probably two or three hours. I suggested to Dr. H. the administration of one-thirtieth grain of atropia, which he at once gave hypodermically. By 11 A.M. his color had improved, his pulse had risen under the atropia to 112, his respirations to 17 or 18, and his pupils had dilated nearly to the normal size. Having an operation at 12 at St. Mary's Hospital, and seeing his steady improvement, I left him in care of Dr. H. In the afternoon at two o'clock Dr. H. administered another one-sixtieth grain of atropia, as his pupils seemed to contract slightly, though his respirations remained about the same. At 7 P.M., in response to a telegram from Dr. H., I saw him again. His color was somewhat improved, pupils nearly normal, respirations 21 and 22, pulse 130, and weaker. He could be slightly aroused, and was able to swallow. Accordingly I gave him gr. xx zinc. sulph., to empty the stomach of any possible solid contents, and so promote absorption of strong coffee. After he had vomited, only, however, the water in which the zinc was dissolved, we gave him three cups of strong infusion of coffee. We set him up on the lounge leaning against the wall, when he did not fall. Shouting in his ear produced a slight unconscious response. We attempted to walk him about, but, finding it utterly impossible, gave it up. Slapping him on the face with a towel wet with ice-water produced some reflex response, as also did any touch on the eyeball. About this time Dr. H. drew off a pint of urine (the patient had not passed any during the day), which was put in a freshly-washed porter-bottle and given to a policeman, with instructions if the man died to give it to the coroner's physician. The ambulance of the Philadelphia Hospital had been sent for early in the evening, and at about 11 P.M. he was taken to the hospital. During his examination there, slight pitting was discovered at favorable points, *e.g.*, under the malleolus. His pulse gradually failed, his pupils dilated widely, and at 2 A.M. he died.

On the trial of Mrs. McClain for murder, it was shown by Dr. Henry Chapman, the coroner's physician, that his brain was congested and his kidneys granular. A microscopic examination showed the disease to have been a chronic interstitial nephritis in an advanced degree. Prof. Koenig examined the urine, which was albuminous, but not to any great extent. No morphia was found in the stomach

or its contents, but a slight yet undoubted trace was found in the urine. Mrs. McClain was convicted of murder in the second degree, with a recommendation to mercy, and was sentenced to six years and three months' imprisonment.

The possibly dangerous effect of even small doses of morphia in chronic Bright's disease, although alluded to by several writers of authority, is not so widely and thoroughly known as it should be by the profession. I have no doubt, as at least in one case I know of, that patients are unwittingly endangered, and sometimes even their lives sacrificed, by either a forgetfulness of this fact or by ignorance of even the existence of Bright's disease. "It is not seldom," says Dickinson (On Albuminuria, p. 162), "that the comatose state to which this disease tends has come on before its time in consequence of the administration of opium. Intolerance of this drug is one of the peculiarities of the disease: doses so small as to be looked upon as safe under any circumstances will sometimes have a poisonous effect. I may instance a case where a patient became comatose after taking five grains of Dover's powder, a medicine which has been stated, though with no great probability, not to possess the poisonous properties of the opium it contains." Roberts (Urinary and Renal Diseases, Amer. ed., p. 350) also gives an instructive case in which the administration of a "few drops of laudanum" was followed by coma and death, and two others in which the uræmic coma was mistaken for narcotic poisoning.

As to the diagnosis in such cases, it is often extremely difficult to decide how far the symptoms are due to the opium, and how far to the induced uræmia. In this case the narcotic symptoms were so decidedly in excess as entirely to mask those due to uræmia. There was stertor instead of hissing, the respirations were decidedly reduced in frequency instead of being quickened, the skin was not anæmic, but livid, the pupil was contracted instead of being dilated or normal, there was no noticeable œdema and no convulsions. The post-mortem showed a congested brain instead of an anæmic one. The pulse, when first noted, was neither quiet and nearly normal, as in uræmia, nor slow and full, as in opium-poisoning. Later in the case it was quickened by the atropia. Moreover, there was no previous history of headache, etc., such as more commonly precedes uræmia. These symptoms, especially the condition of the pupil, will generally enable us to differentiate narcotic poisoning from uræmic intoxication where they do not co-exist.

As to the treatment, the excellent effect of the atropia in increasing the frequency of the respirations, in improving the color, in nearly overcoming the stupor and rescuing him from the danger, was very noticeable, and I doubt not would have been successful had it not been for the condition of the kidneys. Although not successful, it tends to confirm our belief in the useful therapeutic antagonism of the two drugs, as was shown by the numerous experiments made by Drs. Mitchell, Morehouse, and myself (*Amer. Jour. Med. Sci.*, vol. l. p. 67); and also by Dr. Oliver (*Ibid.*, July, 1876, p. 38), who has found in 370 analyzed cases of poisoning by opium or belladonna that the treatment by the antagonistic drug is in all classes of cases greatly superior in its results to all other means of treatment. In this case atropia was a peculiarly fortunate choice, for by its marked diuretic properties it was the best possible remedy to arouse the function of the kidney, and thus at once to eliminate the opium and avoid or mitigate the danger of uræmia.

The attempt was made at the trial, relying upon Taylor's disbelief in this mode of treatment, to show that it was inappropriate, and that the atropia, the more powerful and poisonous drug, was, in part at least, responsible for the patient's death. It need only be said in reply that the dose usually recommended is "one-fortieth or one-sixtieth grain every fifteen, twenty, or thirty minutes, as the urgency of the symptoms may demand" (H. C. Wood's Therapeutics, p. 251), and that in the experiments above alluded to I have repeatedly given to a healthy man one-fifteenth of a grain of atropia at a single dose, hypodermically, without poisonous results, an amount which in this case was given in divided doses at 8 and 10 A.M. and 2 P.M.

1729 CHESTNUT STREET.

SINCE the organization of night medical succor under the direction of the police in Paris, which was begun on January 1, 1876, 12,768 persons have claimed assistance. A very large proportion have reimbursed the expenses.

NOTES OF CASES.

BY WM. MASON TURNER, M.D.,

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I HAVE thought that a brief record of the following cases might not prove uninteresting to the readers of the *Times:*

I.—A CONCEPTION WITHOUT MENSTRUATION.

Within the last two months, Mrs. —, aged 28, native of Germany, and always enjoying robust health and a full flow of animal spirits, was treated for some trifling biliary derangement. In the course of a conversation one day, I was informed that the lady *had never menstruated*, nor were there ever present any signs from as far back as she could remember which pointed to the commencement of the menstrual function. There were no premonitory pains, nausea, lassitude, etc., and no sign of puberty save a very early and extraordinary hirsute growth upon the mons veneris. And that growth, I was assured, was abundant enough for a full-grown woman, even at the tender age of eleven years. But this woman, married some eleven years since, has conceived, aborted twice, and borne four children at full term.

There is an old aphorism,—old enough indeed to be quite time-honored,—that where there is a "show," at however early an age, fecundation is possible. But this woman, in one peculiarity a veritable *lusus naturæ*, goes beyond or behind (?) the old aphorism: she conceives, and very readily too, without having menstruated at all!

More than once I have met with women who menstruated *only during pregnancy*, and two of the cases were in the wards of La Charité, in 1858, in the service of M. Velpeau; but I have never met with a case similar to the one which I have cited.

I distrusted the statement when I first received it; but upon close and careful inquiry among her female friends I learned that the patient had told the truth, and that this "peculiarity" of hers had often been a subject of comment among her acquaintances in her own sex.

II.—OPIUM HABIT.

A man who had been a great sufferer from atrocious neuralgia of the facial nerve recently came under my observation. The "remarkable" feature in his case was the enormous quantity of morphia which he daily used by subcutaneous injection. He had gradually increased the size as well as the frequency of the dose, until at the time he saw me he was using, according to his statement, *one hundred and twenty grains per diem.* His body at this time was a mass of festering sores, almost from head to heel, from the constant use of the syringe. His favorite places for injection were: (1) some inches below Scarpa's triangle, upon the inner face of the left thigh, and (2) in the left arm, about the insertion of the deltoid muscle.

DEATH FROM A CONCEALED HEMORRHAGE OF THE FEMORAL ARTERY.

BY W. G. COTTON, M.D.

I R., adult, farmer, on November 11 received a penetrating wound, from a sharp-pointed penknife, in the leg near the line of the femoral artery, about eight inches below Poupart's ligament. There was but slight hemorrhage of arterial blood, and the wound at first did well. In three days afterwards he gave the wound a wrench in lifting. This brought on sickness of the stomach, pallor, furred tongue, chilliness, and general prostration, with swelling around the wound, and all the apparent symptoms of the formation of an abscess. This condition of ill health continued until three o'clock P.M. of December 11, when he arose from the chamber to lie down in bed. After this effort he felt something break, and said the artery had broken and was filling his leg with blood. He immediately commenced to sink. I saw him at five o'clock P.M. and found him pulseless at the wrist and dying. My father and Dr. Rogers came soon afterwards, and remained until his death at eleven o'clock P.M. We gave him whisky and quinia, but thought it too late to ligate the femoral artery. At the post-mortem examination we found the artery ruptured, and about five pints of clotted blood engorged around the muscles of the leg. The distention extended from two inches above Poupart's ligament to the knee. We did not find any pus.

In this case the knife-blade probably had in the first place severed the outer and middle coats of the femoral artery, and the subsequent inflammation had weakened the remaining coat. The first hemorrhage was, in the opinion of all who saw the case, from a small branch of the large artery. I believe this to be a peculiar case, and one that would admit of much speculation about what might, could, would, or should have been done.

IN a work on the "Voices of Animals," by Landois, additional evidence is collected of the universality of vocal sounds among the lower animals, including the mollusca. The author considers it to be indisputable that ants possess a vocal speech, by which they are enabled to exercise those higher mental faculties to which they owe their high social organization.—*Popular Science Monthly.*

NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROF. PEPPER.

Reported by DR. H. R. WHARTON.

RELAPSES IN TYPHOID FEVER.

THIS patient was admitted to the University Hospital on October 29, suffering from typhoid fever. He was treated in the manner that has proved very successful this year,—namely, with nitrate of silver, quinine, and liquid diet,—and, like the majority of cases so treated, showed an abortive tendency from the twelfth to the fifteenth day.

He did well, and, on the seventeenth day of the attack, when he left his bed without permission, this was followed by no bad consequences. On the twenty-second day, as he appeared so well and complained of liquid diet not satisfying his hunger, he was allowed a semi-solid diet.

His temperature at this time was about 98.3° in morning and 99° in evening. On the twenty-fifth day his temperature suddenly ran up to 102°; on the twenty-sixth day to 103.2°; tongue dry and coated; patient restless and distressed.

This case is shown to illustrate the fact that in a typhoid-fever patient who is rapidly approaching convalescence you may have a relapse; the temperature rising gradually, you may have a gradual development of the original symptoms,—coated tongue, tremulous muscles, tympanitic belly, diarrhœa, and in some cases rose-colored spots.

Is this a second attack or development of typhoid fever proper? is it attended with lesions in the intestines?

It is possible that all the glands have not gone through their proper change, and in this condition some indiscretion in diet or imprudence in motion may cause them to take on fresh action; this is followed by the development of the same train of febrile symptoms. In these cases the peculiar poison in the blood connected with lesions of the glands has not been entirely eliminated.

The duration of the relapse is generally short, lasting from ten to fifteen days, although I have known such cases to go on to perforation. There is another form of relapse, sympathetic in its nature.

In the course of typhoid fever you may have developed pneumonia, pericarditis, etc., but generally the relapse can be traced to intestinal irritation, either catarrhal inflammation or constipation.

Always examine for these, and if you find the food disagree with the patient, or he is taking improper food, or the bowels are constipated, you have a cause for the redevelopment of the febrile symptoms.

On the other hand, if you have none of these, examine every organ for local lesion. The treatment of the relapse is based on the cause: if a redevelopment of the original attack, the treatment should be identical with that of the first attack. The patient may require a more stimulating diet, and you may have to resort to stimulants earlier than in the original attack. If due to irritation of the alimentary canal, restrict the diet, and open the bowels by a gentle laxative if necessary.

If you have catarrhal irritation, with a furred tongue, a small dose of a mercurial followed by a saline will often be followed by a removal of the fever.

This patient, in whom the relapse seemed due to intestinal irritation, was treated in the manner described, and is now doing well; his temperature is almost normal, and he now seems fully convalescent.

LEAD-POISONING.

This patient, Henry L., æt. 32 years, last August was employed in chemical works, where his principal duty was packing litharge. Since that time he has suffered from obstinate constipation, vomits occasionally, has constant abdominal uneasiness, and at times feels as if the bowels were twisted. He also has pain in the lumbar region, which is most marked when he stoops forward. On examining the mouth, a blue line is seen at the junction of the gums with the teeth; this is best seen in the lower jaw. He is very anæmic, conjunctiva sallow, but there is no sign of jaundice. This is evidently a case of lead-poisoning, caused by the introduction of lead into the system in excessive quantities. This disease is most common among workers in lead.

The means of its admission to the system in some cases is very difficult to determine. It can sometimes be traced to water drawn through leaden pipes, to vessels glazed with lead, and to articles which are wrapped in lead-foil.

Individual susceptibility to the action of lead varies greatly. The symptoms of its introduction into the system are as follows: obstinate constipation; vomiting and pain, either continuous or occurring in paroxysms, usually seated about the umbilicus, described as of a twisting character: these constitute lead-colic. This pain is often relieved by pressure. The patient before us obtains relief by wearing a tight band around the belly. In some cases the pain is of a lancinating or shooting character; the duration of the paroxysms varies from a few minutes to hours. Among the constitutional symptoms of lead-poisoning is the lead cachexia or anæmia, due to the distinctive action of lead on the blood-corpuscles; the sallowness of the conjunctiva is marked in the case before us. The blue line on the gums will be found partly in the tissue of the mucous membrane and partly upon its surface; most evident at the junction of the gums with the teeth. It is probably produced by the action of sulphuretted hydrogen, resulting from the decomposition of particles of food on the lead forming a sulphuret of lead. This line, taken with the other symptoms, is a valuable diagnostic sign. Lead-palsy, produced by a deposit of lead in the tissues, is another symptom of its introduction into the constitution. The extensor muscles of the fore-arm are generally the first to show its effect. In some cases you have no paralysis, but mere muscular pain; this is shown in the present case.

In other cases you may have various cerebral and nervous disturbances, due to its presence in the nerve-tissues. Among these are neuralgic pains, either local or general, and many spasmodic affections. Lead when introduced into the system acts first on the intestinal canal, interfering with the secretion, but acts more permanently by absorption into the blood, and by being deposited in the tissues, where it has an affinity for the terminal fibres of nerves, in some cases producing painful spasms, in others paralysis. This may be due to a difference of degree of the same action, or to a different action on the motor or sensory fibre. We have already alluded to the anæmic condition produced by lead; but its action on organs which excrete it from the system is worthy of note. This is seen in the albuminuria consequent on lead-poisoning.

The treatment of this affection has several points in view. First, the removal of lead from the intestinal canal; second, its elimination from the tissues; and third, the treatment of special manifestations.

For the removal of lead from the intestinal canal we shall give the sulphate of magnesium with dilute sulphuric acid. This converts it into an insoluble salt, and acts also as a purgative. Internally, to eliminate the lead from the tissues, we shall give the iodide of potassium in full doses. This forms the iodide of lead, which is excreted by the skin and kidneys. With regard to the treatment of special symptoms, if you have severe colicky pain it must be relieved by anodynes or anæsthetics. The following is a preparation which acts well:

℞ Ext. colocynth. comp., gr. ii;
Ext. opii, gr. ss;
Ext. belladonnæ, gr. ⅙.

This pill repeated until the pain is relieved and the bowels opened.

The palsy may be relieved by the internal administration of strychnia, and locally by the application of the faradic current to the affected muscles.

The anæmia is best treated by iodide of potassium and the salts of iron.

TRANSLATIONS.

ICTERUS WITHOUT APPRECIABLE ORGANIC AFFECTION OF THE LIVER, FOLLOWED BY RAPID DEATH WITH SYMPTOMS OF INTERNAL STRANGULATION AND COMPRESSION OF THE VENA PORTA.—Dr. Blutel contributes the following notes of a case coming under his observation to *L'Année Médicale*, September, 1876. The patient was a man 62 years of age, somewhat broken in health, sober, and leading a regular life. His skin was pale, with a yellowish tint; he was habitually constipated. When first seen he was pale, the tongue grayish but not dry. He complained of general discomfort and tension in the abdomen, but no actual pain. The pulse was 90. The patient had been somewhat suddenly attacked with pain in the abdomen four days previously; no other history was obtained. His bowels not having been moved for eight days, an aperient was ordered, together with an enema. These failed to operate, and on the next day the patient was worse; he

vomited, and the pain was increased. The enema which was rejected gave an extremely offensive odor. The urine was clear and brown, the tongue was dry, and the patient complained of extreme thirst. The skin had become yellow, and, on examination, the liver appeared slightly diminished in size; no tumor or protuberances could be observed on its surface. The patient was ordered Rivière's anti-emetic potion, ice to swallow, a castor-oil enema, and a hot bath.

From day to day the patient became worse; the skin dry and more deeply icteric; the pulse rose to 110, then to 115 and 130; the urine was dark; the vomiting, at first controlled by ice, recommenced. The enemata were constantly returned, with a horrible odor. The only relief experienced was during the hot bath. On the fourth day petechiæ appeared on the abdomen and legs, the heart beat irregularly, the feet were swollen. The patient suffered from great oppression, he seemed suffocating; the skin itched intensely, nothing was borne on the stomach or in the rectum, and he finally sank and died, in full possession of consciousness to the last. Unfortunately, no post-mortem examination was allowed. x.

Coloring Wines by Fuchsine.—MM. Bouchardat and Ch. Girard call attention in the *Bull. Gén. de Thérap.*, October 15, to the custom lately introduced into France of coloring wines by means of fuchsine with or without arsenic. Examination shows that the superior qualities of Burgundy and Bordeaux are not tampered with, the adulteration being confined to the inferior and cheaper qualities. The immediate effect of these wines of spurious manufacture is not poisonous, but their continuous use, MM. B. and G. think, must be in the highest degree prejudicial to the health of the individual using them. Several methods of detecting the drug are detailed in the paper referred to, among which one of the simplest is as follows. Five to six grammes (about f℥iss) of the suspected wine are poured into a little flask of about 30 grammes (f℥i) capacity. To this 8 to 10 drops of ether are added, and the mixture well shaken, and then allowed to rest for some three or four minutes. A portion is then decanted into another flask, and vinegar or acetic acid is added until the mixture smells decidedly of it. If the wine contains fuchsine or aniline violet the ether will become rose or violet in color, and after a few moments the acetic acid or the vinegar collects at the bottom of the glass in a vividly-colored globule.

Certain other coloring-matters natural to the wine will also yield this reaction, but only after a very considerable period and after passing through various shades of yellow, rose-colored, red, and finally violet. x.

Diagnosis of Progressive Pernicious Anæmia.—According to Eichhorst, pernicious anæmia may be diagnosticated even in its earlier stages with absolute certainty. Not clinical appearances but anatomical changes are here to be taken into consideration, and the latter are to be looked for in the blood. Briefly, the affection may be regarded as a disease of the red blood-corpuscles, as easily discerned as in leukæmia. Eichhorst himself has never missed the appearances to be mentioned in any of his cases, and has frequently demonstrated them to his colleagues.

While a portion of the red corpuscles retain their normal size, and are only marked by extreme paleness with a tendency to crenation and the formation of rouleaux, others among them attract attention by their small size. The latter are often not more than one-fourth the diameter of the well-formed corpuscles. In addition they are more deeply colored; and, if allowed to roll about under the thin glass cover, their appearance in profile shows them to have lost to a greater or less extent their biconcave outline. Sometimes they are so small as to look like little red-tinged fat-globules.

Several hundred examinations were made, both on the blood of healthy persons and on that of patients suffering from the most various diseases, among which were anæmic and cachectic conditions, but no changes at all resembling the foregoing were met with. Observation of the disease under consideration from its earliest stages will show that as the affection proceeds in its course, going on from bad to worse, the proportion of these foreign elements increases. E. has never observed a case in which the number of relatively intact blood-corpuscles was so large towards the end of life as those which were represented by the small reddish globules.

The white corpuscles are always diminished in number, and those masses of protoplasm so frequent in healthy blood were only sparingly present.—*Wien. Med. Presse*,

1876, No. 40; from *Centralb. f. Med.*, No. 26, 1876.

ANEURISM OF THE RIGHT VERTEBRAL ARTERY (E. Ledaire: *La Presse Méd. Belge*, 1876, No. 20).—The aneurism was situated on the right side of the cord, close to the fork-like junction of the two vertebral arteries to form the basilar. The upper part of the enlargement was regular, the lower sac-like in form, and the size of the whole tumor about that of a hazel-nut. On the corresponding portion of the left vertebræ there were also two dilatations of small size. The cause of these changes was found to be an atheromatous process which had been going on in the walls of the vessels. The patient was sixty-three years of age, and, strange to say, had given no evidences of disease. Death occurred suddenly, from hemorrhage into the meninges of the brain. W. A.

ALBUMINURIA AS A SYMPTOM OF EPILEPTIC ATTACKS.—Otto (*Berliner Klin. Wochens.*, 1876, p. 609) made a series of examinations of the urine in a number of epileptics. The examinations were conducted with great care, running over a number of successive attacks in each case. His conclusions show that transitory albuminuria is a frequent though not invariable result of the epileptic onset. It appears, not in the urine drawn off just after the attack, but that which is passed a little later, and its production seems to be the result of blood-pressure upon the capillaries of the kidneys. X.

PERCUSSION OF BONES. — Prof. Lücke (*Centralbl. f. Chirurg.*, 1876, No. 43) believes that this means of diagnosis can be made practically available, not only for the purpose of ascertaining painful points, but also of detecting deposits in the bone-substance or marrow. In the case of the long bones, the epiphysis gives invariably a higher note than the diaphyses, but callus or foreign growths in the bone-substance cause lower resonance. The examination should always be comparative, both the healthy and diseased sides of the body being sounded. X.

SPONTANEOUS EVACUATION OF A VESICAL CALCULUS BY AN UNUSUAL ROUTE.—The *Centralblatt für Chirurgie*, 1876, No. 43, gives the following case from a Polish journal. A child five and a half years old, in good health otherwise, had suffered for six months with pain in the hypogastrium and difficulty in urinating. For five weeks previous to examination a tumor had been gradually forming in the left inguinal region, extending into the scrotum, about an inch broad by half an inch wide, showing a small opening in the centre. The urine was voided by this outlet instead of following the usual course. The sound could be passed downwards into the scrotum, and upwards into the bladder. Dilatation was practised in both directions, by means of which a conical, dark-brown, somewhat soft urinary concretion was extracted from the scrotum. A No. 12 elastic catheter, and even the little finger, could be pushed into the bladder. The fistula healed up in six weeks. Subsequently there was incontinence of urine, but entire recovery eventually took place. X.

EXTRAORDINARY CASE OF PERSISTENCE OF IMAGES IN THE HUMAN EYE. — Dr. Paolo Gorini (*La France Méd.*, 1876, p. 735) tells the following incident which occurred to himself. One night, having fallen asleep while reading a book, he presently wakened, when on looking at the wall opposite his bed, which was illuminated by a lamp near him, he observed it covered with printed characters of large size forming words regularly disposed and separated by lines like those in the book which he had been reading. Not only could he see the text, but he could distinguish the annotations in smaller characters. The whole appearance was vague and indistinct, but there could be no doubt that the image seen on the wall was that of the pages which he had been reading when he fell asleep.

This strange apparition lasted some twenty seconds, and in this space of time was reproduced each time at which after closing he again opened his eyes. The incident is interesting as a case of persistent image in the retina. The assertion made a few years ago will be remembered, namely, that the object last appearing before the eyes of a person suddenly dying would leave its image on the retina, and the delusive hope was entertained that photographs of the retina might prove of use in medico-legal cases. X.

TYMPANIC CHARACTER OF THE CARDIAC BRUIT IN CASES OF CYLINDRICAL DILATATION OF THE ASCENDING AORTA. — Dr. Noël Gueneau de Mussy contributes an article on this subject to *La France Médicale*, Nov. 8, 1876. He has already alluded in former writings to a sign of general dila-

tation of the ascending thoracic aorta, namely, the perception of a prolonged, clangorous, metallic—in a word, tympanitic—second cardiac sound, along the course of the vessel. Further experience assures him of the value of this sign, which he goes on to explain. Alluding to the normal second sound of the heart, *dry*, *clear*, *shorter*, and more *acute* than the first, he observed that in anæmia, and more so in dilatation of the aorta, this sound becomes amplified, redundant, and attains a characteristic metallic resonance, which is best designated by the word tympanitic. Its maximum intensity corresponds to the course of the ascending aorta, as near as can be ascertained. Dilatation of the aorta is not a very rare affection, particularly in old age. It is met with in various degrees, from simple uniform dilatation of the cylinder, to bellied-out enlargements which transform the vessel into a sort of elongated pouch without actually forming a sac upon the artery. At the same time that the calibre of the artery is increased, its texture is modified; its lining coat presents an opaline, whitish-yellow tint; it is sometimes mammillated, often strewn with yellow or milky lines, points or patches; occasionally the coat can be raised or stripped off in flakes; in some cases it is incrusted with concretions looking like semi-transparent barley-sugar. These lesions indicate the morbid process, and account, in Dr. M.'s opinion, for the dilatation, etc. The modification of the second sound, alluded to above, may be the only symptomatic manifestation of the aortic dilatation when this is slight. It is sufficient, however, to establish the diagnosis, when the tympanitic sound is very marked. In other cases, in addition to this symptom, which may be regarded as characteristic, others may be perceived, such, for instance, as dulness behind and along the border of the sternum, parallel in a measure with the dilatation of the aorta. After alluding to the investigations of Chevers and Gairdner as to the size of the aorta, and the opinions of G. as to the cause of the sounds heard in cylindrical enlargement, Dr. M. gives it as his opinion that these sounds are produced by the passage of the blood-column through the relatively narrowed orifice of a vessel partly enlarged, as suggested by Gairdner. When the aorta extends beyond the sternum, the cylindrical dilatation reaching to the transverse portion, a vague, profound impulse may be felt, isochronous with the ventricular systole. But if in place of this sensation a movement of enlargement is clearly perceived, corresponding in a limited space to a dull sound, or to a diminution of elasticity and of transonance; if in place of a prolongation of the sounds at its base, circumscribed sounds are heard at this point, or sounds subjacent to those found at the origin of the vessel; if at a certain stage of the disease functional troubles, sometimes sudden, indicating compression of the thoracic organs, supervene; there is more than a simple cylindrical dilatation, there is a sacculated tumor. This tumor may itself be superposed upon a cylindrical dilatation. As to the question whether, when the cylindrical dilatation of the aorta is considerable, certain functional troubles may not present themselves in addition to the symptoms above described, Dr. M. is inclined to the affirmative, and gives the following case. In this the phenomena believed to be characteristic of cylindrical dilatation of the aorta were presented, namely, tympanitic thrill, great exaggeration of the second sound, perceived all over the chest, dulness over a narrow elongated zone parallel to the upper portion of the right border of the sternum, without *bruit de souffle*, without frémissement, without expansive or heaving motions. This prolonged sound had its maximum at the origin of the aorta; it was heard strongly along the course of this artery as far as the first intercostal space near the sternum, one of the points where, according to the observation of Prof. Baccelli, sounds produced at the aortic orifice are most clearly perceived. No percussion or auscultation sounds pointing to a circumscribed tumor were perceived; the patient took no peculiar attitude during sleep, but he suffered from shortness of breath. It is not impossible that the rigidity and dilatation of the aorta might have introduced some trouble into the mechanical conditions of the circulation. This circulatory phenomenon might also, as an auxiliary or predisposing cause, explain the frequency and tenacity of bronchial congestion in this patient. This congestion was accompanied by violent spasmodic cough, with painful dyspnœa. The patient was rheumatic, subject to neuralgia, herpetic eruptions, etc., which, together with gouty symptoms, came

later to complicate matters. The diathesis which was manifested in these symptoms was probably the original cause of the attacks of bronchitis and dyspnœa; but it is easily seen how troubles in the central circulation might favor pulmonary congestion. X.

TEMPORARY ALBUMINURIA IN DELIRIUM TREMENS (Dr. Weinberg: *Berlin. Klin. Wochenschrift*, No. 32, 1876).—Dr. Weinberg had excellent opportunities of studying delirium tremens during his service in the wards of the Hamburg City Hospital, and in thirty-three per cent. of one hundred and fifty-six cases in all, studied by him, he noticed not only the presence of albumen in the urine, but also a relation between its occurrence and the delirium.

His observations were accurately made in but eleven cases, owing to the great difficulty of obtaining the urine several times a day from delirious patients. He gives the following résumé of the results at which he arrived:

1. There is not only a relation in time between the appearance of albumen and the occurrence of delirium, but the intensity of the latter increases with the amount of the former. In some cases, at the beginning and ending of the delirious stage, but traces of albumen can be detected, while in the interval its quantity may reach ten per cent.

2. In none of the cases from which these conclusions are drawn was there any other disease existing as a complication. The temperature was not high in any of them, and the frequency of the pulse was not abnormal except when there was unusual agitation of the patient; nor were any evidences found that would warrant the supposition of the existence of any renal disease. W. A.

LUXATION OF BOTH SHOULDERS (Cossy: *Bulletin de la Société Anatom. de Paris*, 1875).—A patient suffering with phlegmonous abscess of the leg applied for treatment, and upon examining him it was found that both shoulders had been dislocated, the right for five years, the left for three weeks. The patient died suddenly, and at the post-mortem examination the parts surrounding the joint of the left side were in good condition; there was a rupture of the capsular ligament, which was not large enough to permit the head of the humerus to pass through it, and the synovial membrane was reddened, especially around the head of the humerus and along the long tendon of the biceps. On the right side no peri-articular changes were found, nor any tear in the capsular ligament. Upon opening the cavity of the joint, the articular surface was found to have become smaller, and was covered with whitish granulations and separated from it by a ridge. There was seen upon the inner surface of the scapula a somewhat wider new articulating surface. The head of the humerus had changed its shape, being convex on its inner side, which corresponded with the new articular cavity, while the posterior part, which corresponded with the glenoid cavity, was concave. W. A.

EXPERIMENTAL INVESTIGATIONS AS TO THE CONVEYANCE OF TYPHUS ABDOMINALIS TO ANIMALS.—Birch-Hirschfeld (*Berlin. Klin. Wochenschrift*, No. 32, 1876), after feeding rabbits with the stools of typhoid patients, came to the conclusion that it was possible in this way to cause in the animals subjected to the experiment a disease very similar to typhoid fever.

R. Bahrat carried out experiments in the same direction, but is not able to support the results of the former investigator. The latter, in his experiments, made much more free use of the stools than the former. The symptoms which should be found during life to establish the existence of a disease resembling typhoid, a continual fever of one or one and a half degrees moderate elevation above the normal temperature, and decided loss of flesh, were wanting, as were also infiltration of Peyer's patches and of the mesenteric glands and spleen, which were sought for at the post-mortem examination of the ten animals upon which the experiments were made. Entirely similar were the results obtained by putting four animals in a large clay cylinder, upon the floor of which large quantities of typhoid stools were distributed. W. A.

IODIDE OF STARCH AS AN ANTIDOTE.—Dr. Bellini, professor of toxicology at the Royal Institute at Florence, recommends iodide of starch as a valuable antidote in poisoning by alkaline and earthy sulphides, caustic alkalies and ammonia, and the vegetable alkaloids. In poisoning by alkaline or earthy sulphides he believes it preferable to all other antidotes; in poisoning by caustic alkalies it is applicable when acid drinks are not at hand.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JANUARY 6, 1877.

EDITORIAL.

MEDICAL SCIENCE.

IN another column we print an account of the communications made to the St. Petersburg Medical Society by the two prominent Russian physicians who were delegates to the International Congress. We leave our readers to recognize how much of truth there is in the censure and in the praise given to the American profession. Our medical educational system is certainly well fitted to serve—like the "frightful example" of the temperance lecturers—to show the results of leaving the medical profession at the mercy of itself and of every dishonest member in its ranks. We sincerely desire — hope would express too much of expectation —before we go hence to see the strong hand of law laid upon the present unbounded license, if not licentiousness, of medical education. It is a matter which must prove a perplexing puzzle to most foreigners, how with such a system we can develop, as we do in every practical branch of medicine, scores of physicians fitted to stand before kings and princes, many of them indeed even veritable kings in their professional realms. Prof. Rudenew has partially hit the solution when he speaks of the education in hospitals, etc., after graduation. For the complete filling out of the equation, however, to this must be added the exceeding earnestness and quickness of the American race, the atoms of which under the catalytic stimulus of desire for worldly success are capable of almost any chemical or vital activity.

In the scientific portion of medicine the American profession is simply nowhere in the world's race; in practical medicine it is everywhere fully abreast with the foremost. In the science of medicine we have developed in the hundred years not one great pathologist fitted to take up the gauntlet with a Virchow, not one great physiologist to compare with Helmholtz or even with Vulpian, not one medical chemist to stand with Hoppe-Seyler, not even a human anatomist to rival Hyrtl. There is not to-day and there never has been on this continent a well-organized physiological or pathological laboratory steadily fruitful in good work. Why is this? It is of course in a measure due to our system of medical education, which does not require the professor of a scientific medical branch to be anything more than a popular orator, or to have any other than a book-knowledge of the branch he teaches. This is not the sole factor, however. It is affirmed that the American brain is a purely practical one, and that we do not produce the material out of which scientists are developed. This certainly is not true. In natural history, in physics, in astronomy, in mathematics, in philology, in every branch of science outside of the fundamental medical sciences, the United States has produced men who stand as peers of the foremost in Europe.

Moreover, there have been men who at thirty have accomplished as much of original work in the medical sciences as have at the same age the most illustrious of our European *confrères*. The promise of the morning, however, is not fulfilled by the noon of life.

The reasons of this are not so much intrinsic to the individual as extrinsic. There are no facilities for work provided; there is no active *esprit de corps* to stimulate to sustained effort; there is no career offered which, whilst affording a modicum of substantial reward, shall give the reputation and influence which atone with many for a pecuniary compensation less than that afforded by the more lucrative professions. It is true that many of those

persons who have done most work in the natural sciences have contended with straitened circumstances all their lives. There is, however, an important difference between the devotee to the natural sciences and the enthusiast in the medical sciences. Both start at twenty years of age, full of enthusiasm, and willing to sacrifice much. At thirty-five or even earlier both find that much of the youthful enthusiasm has been expended, and both have, perchance, become burdened with the responsibilities of marriage and the cares of life. The naturalist or astronomer, however, finds a money-making career closed against him. He is a pure scientist; there is no lucrative application of natural history or astronomy, and without doing absolute violence to his past he cannot adopt any other course of life than that in which he is engaged, and, indeed, is usually not only untrained, but even absolutely unfitted for a new career. The physiologist, who has probably always retained some hold on practical medicine, finds it very easy to slide into a life whose rewards are so immediate, and for whose success the previously-earned reputation makes a most excellent foundation.

It is easy to point out the causes of our extraordinary lack of development in the fundamental sciences of medicine; it is less easy to find an effectual remedy. The proper direction of the present efforts would, however, seem to be clear. In the first place, possible careers should be opened. For this purpose endowed professorships must be provided as the ultimate goal, with fellowships or some similar office, which shall afford some maintenance during the period of probation and waiting. A fellowship of five hundred dollars a year will enable a really earnest man to prosecute his studies; but no professional salary of less than five thousand dollars a year should be thought of, and to this must be added the furnishing of laboratories and the paying of laboratory expenses. The means of livelihood being thus provided, the professor should be compelled to abstain from any attempt at a duplex career, should be allowed to have no connection with practical medicine, and should be required to expend all his energies in his laboratory and class- or lecture-rooms. If this system were adopted, and great care exercised to see that no man be admitted to a professorship who has not given, by personal sacrifice, evidences of natural enthusiasm, and, by work accomplished, proof of the ability without which enthusiasm is as steam without an engine, then might we hope to see American physicians be other than skilled appliers of the Old-World science.

FOOT-BALL.

SINCE the writing of our editorial on foot-ball no casualties more severe than fracture of the arm have occurred on the University grounds, although a broken skull is said to have been produced in a rival institution. The University Hospital is, fortunately, so close to the University grounds that parents may rest assured that all that surgical skill can do will be done for their unfortunate offspring. We trust, however, that Provost Stillé will, if he has not already done so, warn the hospital authorities that they may be ready. The following additional foot-ball rules have been proposed in England, and we trust that they may be adopted here as well as there: they may serve to mitigate the horrors of the game:

1. No match to be played without a surgeon being in attendance on the ground. 2. Should there be a hospital within easy distance, notice to be given beforehand that the services of the staff may be called into requisition. 3. An ample supply of bandages, lint, splints, and other appliances to be kept always in readiness. 4. An ambulance to be in waiting to convey any one who may receive an injury to his home or to the hospital. 5. If an ambulance cannot be procured, then a sufficient number of cabs to be in immediate call. 6. Proper attendants and nurses to be engaged

to wait on the sufferers. 7. Brandy and other stimulants to be kept on the grounds. 8. Crutches and sticks to be supplied for the use of those whose injuries may be only slight, but who yet may require some artificial support to enable them to return to their homes. 9. No game to be played except on ground within easy reach of a telegraph-office.

If it be possible to open the eyes of the American people to the disgraceful condition of medical education in America, our Western *confrères* will probably end their labors by the performance of the miracle. At Louisville, Kentucky, the rival journals, both in the interests of certain schools, both of a partisan type, weekly make their charges and counter-charges, and the daily papers are by no means avoided by the champions of the several interests. Now public attention is being drawn most forcibly to the subject. The Siamese institution variously known as the Louisville Medical College and the Kentucky School of Medicine has been dragged in its medical college body into the courts by a Mr. Sale, who sues for a return of the fees which he had paid for instruction. Before all the credit of the profession has been pulverized, we trust that the Kentucky Legislature will destroy the evil by the adoption of a system of public State examinations.

LEADING ARTICLES.

THE DUTIES AND PRIVILEGES OF EXPERT WITNESSES.

There are continually arising in all our courts questions which require the testimony of medical men *professionally*. For some reason, it matters not what, the neighboring practitioner is called upon to give his testimony, and not the professed expert. The experience which has grown out of this custom has shown the need of a wider knowledge in the profession of the duties and rights of the medical expert. It is purposed to discuss the actual state of affairs, proposing no schemes for improvement. Three points are to be considered: 1, What constitutes an expert witness? 2, What are his duties? and 3, What are his privileges?

1. What constitutes an expert witness? An expert witness* is a person who has had special opportunities for observation or study of the subject on which he is to testify. At least it is theoretically so; often a great deal of charity is used in judging of the qualifications of an expert. Thus, in Massachusetts the evidence of an educated practising physician, who had not, however, made mental diseases a special study, has been received upon the subject of insanity.† In our State the ruling is different.‡ In point of fact, the court is the only person who can decide the question.§ Indeed, the failure to make a proper selection for expert witnesses often leads to those disgraceful scenes in court familiarly known as "expert wars."

An evil arising from the present system of securing experts is that the witness is apt to take sides. He hears the statement of the case from the attorney of one side only, expresses an opinion, and then thinks it his duty to sustain his opinion at all hazards. Or, it may be, he takes the moral evidence into consideration, and forms an opinion on the merits of the case, and in this way becomes a partisan. Prof. Reese, in his excellent work, says, "It is his special function carefully to weigh all these facts, —*i.e.*, the facts given in evidence,—to sit in calm judgment upon them, and to deduce conclusions from them which he delivers to the court and jury as his opinions."‖ Hence it follows that a true expert should be biased neither by previous opinion nor by his own idea of right or justice. This could, to some degree at least, be brought about by the character of the examination.¶

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* From necessity, an exception to this rule of excluding opinions is made in questions involving matters of science, art, or trade, where the skill and knowledge possessed by a witness, peculiar to the subject, give a value to his opinion above that of an inference which the jury could draw from facts which he might state. Such a witness is termed an expert, and he may give his opinion in evidence.—Bouvier's Law Dictionary, article "Opinion."

† Prof. Washburn, Am. Law Review, i. 56.

‡ Mere matter of opinion is entitled to no weight at all, unless it comes from persons who first give satisfactory evidence that they are possessed of such experience, skill, or science as entitle their opinions to pass for scientific truth.—11 Casey, 324.

§ 19 Smith, 36.

‖ Reese: A Manual of Toxicology. Philadelphia, J B. Lippincott & Co., 1874, p. 119.

¶ And in general, scientific men ought to be examined only as to their opinion as to the facts proven, and not to the merits of the case.—Starkie on Evidence, 135.

2. What are the duties of an expert witness? In order to develop the duties of an expert, we must first look at the character of his testimony. The primary kind of evidence brought before a jury is that of facts of which the witness is personally cognizant. From these facts the jury make certain deductions in determining their verdict. Now, if the testimony involve certain technical facts which the jury, from a lack of technical education, are not able to estimate properly or draw correct conclusions, the expert is summoned to testify, not *facts*, but his *opinion* whether this or that conclusion can be drawn from a certain set of facts produced in evidence. But it is the province of the jury to decide upon the reliability of the testimony: hence the expert is not asked what can result from the facts given in testimony, but a suppositious question is propounded, based on an assumed set of facts similar to those given in evidence, and to this the answer is given. The expert witness consequently deals with opinions and hypothetical questions.

In forming the opinion, only those facts actually assumed in the question should be considered in the mental process by which the opinion is obtained, since the witness has no responsibility as to the character of the question. Should the witness, having heard the testimony, have formed an opinion, he must exercise great care to see if the hypothetical question coincides with the facts upon which he has formed his opinion; if it does not, the opinion must be modified to suit the question. The witness is not responsible for the consequences of his answer; nor does he assume to be infallible. His oath binds him to tell the truth; he is asked for his opinion, and he should conscientiously give *his opinion.** Except as a matter of reputation, it makes no difference whether that opinion expresses what is received or rejected by the generality of the scientific world,† so long as the witness honestly gives his own conclusions: the value of his testimony will be determined by other means.

Hence a question used by some attorneys, "Whether in a case of life or death you would swear that this or that is *certainly so*," is a trick of trade.‡ The expert should also hear all of the testimony produced relating to the subject on which he is to give an opinion; for the hypothetical question may be framed, "Supposing the evidence produced be true, what, in your opinion, would be the result?"

Again, attorneys are seldom experts in the department for which the expert is summoned. Hence he may be frequently consulted by the counsel upon these technical subjects. In duties of this sort he should remember that, as any student of science, he is a seeker after truth; his advice should have this end in view, and not to endeavor to trip up the witnesses on the other side; at the same time he should allow no inaccuracy or carelessness to pass by unnoticed.

All scientific investigations—*e.g.*, autopsies, analyses, etc.—should be made with particular care. The conditions to be observed are *facts*, and to these must the witness testify primarily: his opinions come afterwards, and are based on these facts. Testimony describing experiments carelessly or ignorantly performed is, in effect, perjury,—since it falsifies the true condition,—and should be so considered.

This subject of an expert witness being both a witness of fact and of opinion, while fully recognized, is not usually developed with sufficient clearness. In a case of homicide, for instance, the physician who took charge of the wounded man, or who made the post-mortem examination, testifies so far only to facts. A question may be asked whether, in his opinion, the wounds described were sufficient to cause death. He answers this question from his recollection of the case, and not from his description of it. One may be much more vivid than the other. This really belongs to that class of questions which elicit opinions from non-expert witnesses,—*e.g.*, when it is asked of a witness of a transaction whether the prisoner acted as if insane. No one would call this testimony expert testimony. But the question may be asked hypothetically, embodying the statements given by the witness. The question is now

* For the consequences of his opinions he should clearly understand that he is in no wise responsible. He is bound by the solemnity of his oath to tell all, and to suppress nothing of what he conscientiously believes to be *the truth*, no matter what may be the result to the accused.—Reese, op. cit., p. 119.

† After he has given an opinion and the grounds for it, whether right or wrong, it should be left there.—Elwell: A Medico-Legal Treatise on Malpractice and Medical Evidence. New York, John S. Voorhies, 1860, p. 309.

‡ In the Laros case which was tried in Easton last August, a favorite question by the defence was worded somewhat after this fashion: "Doctor, in a case of so great importance as this, involving the life or death of the prisoner, would you under oath assert"—whatever point that might be under examination.

a general one, freed from the case in point; the answer should be to the question itself, disregarding all recollections. Then does the witness give expert testimony. Hence it is seen that many men employed as experts testify only or chiefly to facts,—*e.g.*, the pathologist who makes the post-mortem examination, or the chemist who makes an analysis. These are brought into the case for the purpose of ascertaining such scientific facts as may be in the province of their investigations.

3. The privileges of experts.

There are three topics to be discussed under this division. I., compensation; II., the obligation to obey the subpœna; III., the character of the testimony.

I. It would seem plausible that any professional man has a right to demand compensation for any opinion which has for its basis his professional knowledge. If the witness is not careful, his claim will stop with the demand. At the outset we must distinguish between expert testimony properly so called, and a scientific investigation. In the older English decision, not even this distinction was made. Thus, in 1832 it was decided that "the surgeon will be allowed only for his attendance on the trial, and not for his fee for opening the body."* At present, and in this State at least, this service is considered as pertaining not to a witness, but to a person employed in a particular service.†

For services of this sort the only matter then to determine is the value of the services. Since the county commissioners are proverbial in rating the value of such services very low, it is wise to have a written agreement. Prof. Reese's advice on this subject is "to insist in advance on a bond duly signed by all the commissioners, or by some equally responsible party,‡ for the payment of the fee agreed upon." But in regard to the office of a witness properly so called. If it is a civil suit, the way is plain, since an English decision, made in 1843, seems to be the precedent. In this decision a witness called to depose to a "matter of opinion depending on his skill in a particular trade has, before he is examined, a right to demand from the party calling him a compensation for his loss of time; and there is a distinction between a witness thus called and a witness who is called to depose to facts which he saw."§ But if the commonwealth summons? Prof. Washburn, of the Harvard Law School, says,‖ "If the case be one of a public nature involving the question of a crime of magnitude, when the public safety requires the investigation, the right to compel the attendance of such a witness becomes an incident to the exercise of government itself, in the same way that a juror is obliged to sacrifice convenience or profit to render a public service." The same reasoning would compel counsel and all judicial officers to *give their services* in cases of great magnitude. Hence it is seen that for work performed, and for opinions in private cases, the expert has a right to demand a fee. In public suits, where the medical man is most usually called, while there is no decision, the probabilities are that he can collect nothing. It is necessary, then, that he should ask for a certain fee in advance, *i.e.*, before he enters the witness-box. If it is refused, he should inform the attorney that he is unwilling to testify; and if that gentleman is willing to risk such a witness, he must either testify, or, by declining, get a decision from the court. The probabilities are that he will either receive his professional fee or not be called to testify.

II. Is a man who knows none of the facts in any case compelled to leave his ordinary avocation and attend a trial simply to give his opinion? He cannot be taken out of his State, of course, but in his own State it seems that he is subject to the same laws and same processes as the man who is acquainted with all the facts in the case. I have been able to find only a single decision on it, and have not been able to see the original of that. In 1858 Lord Campbell decided in the case of Betts *v.* Clifford—a private suit—that a scientific witness was not bound to attend upon being served by a subpœna, and that he ought not to be subpœnaed.¶

The only safe way, apparently, is to obey.

III. The character of this testimony. The ordeal in giving testimony is the cross-examination. Those who may still remember the dread of expectation before their examination for their degrees will

* Rex *v.* Taylor, 5 Carrington and Payne, 301.

† In this case he performed not the office of a witness, but the business of a person employed in a particular service.—Chief-Justice Gibson, 3 Barr, 462.

‡ Reese, op. cit., p. 128.

§ 1 Carrington and Kirwein, 23.

‖ Loc. cit.

¶ Warwick Lent Assizes, 1858, quoted in Taylor's Med. Jurisprudence, Am. ed., 1873, p. 40.

understand, when told that a cross-examination of an expert witness is a realization of that expectation increased by the fact that your examiner is endeavoring to "floor" you and knows little or nothing about the subject. There may be exceptions, of course. Is there, then, nothing to do but to answer patiently all and everything given you to answer,—especially the so-called categorical questions, which are frequently so framed that while requiring yes or no for an answer, neither yes nor no will give the truth; whether from ignorance or design I shall not attempt to judge. While it rests solely with the court to decide how far irrelevant questions may be asked,* a great deal depends upon the witness as to how many questions of this character will be asked. That person who has not yet learned to answer *only the question*, volunteering nothing in addition, is not ready to become an expert witness. After this, the most important requisite (always presupposing knowledge) is the ability to keep one's self thoroughly in hand, calm, cool, collected. Then, as a right, answer no question until its *full* meaning is clear to you: if there is any ambiguity latent in the question, decline answering until it is expressed clearly and explicitly.† If, in addition to this, the witness is careful to use correct English, briefly and positively, the cross-examiner will hardly venture upon the attempt to embarrass, much less to abuse, the witness. Should he do so, an appeal to the court would in all probability give him the desired relief.

CHARLES MCINTYRE, JR.

EASTON, PA., November 20, 1876.

CORRESPONDENCE.

NEW YORK, December 11, 1876.

TO THE EDITOR OF THE PHILA. MEDICAL TIMES:

DEAR SIR,—The twenty-ninth anniversary meeting of the Academy of Medicine was held at the hall of the Academy, on the evening of November 16, and on this occasion the oration was delivered by the Secretary, Dr. W. T. White. Like so many addresses during the present year, it was devoted to the progress made in the medical sciences during the century just closed, particularly in the United States.

At the last meeting of the Academy, December 7, the annual reports were read, and the nomination of officers made; after which Dr. Austin Flint, Sr., read a paper on the "*Results of Clinical Studies in Relation to Phthisis.*" It was principally devoted to a consideration of some of the facts presented in his work on the subject recently published; and he apologized for the circumstance of an author becoming the reviewer of his own work. Much of the book, he said, consisted of dry statistics, which would prove of little interest to the general practitioner, and therefore he had thought it well to offer some of the conclusions which he had derived from his observations in a more compact form, hoping that the results of his studies on this subject, continued as they had been through three and a half decades of life, might thus be of some practical service to the profession. He had divided his cases into three classes: (1) Those in which recovery took place. (2) Those in which the disease was arrested, but without recovery. (3) Fatal cases. The last class he divided into two groups: (1) Those lasting from three to forty years. (2) Those in which death occurred in a year or less. In seven cases, after apparent recovery, the disease recurred, and all of these cases proved fatal except one. In this there were two recurrences; but the patient eventually made a good recovery. Of the fatal cases which were long continued six lasted from eight to forty years, and in not one of these was the disease of small extent. The following were some of Dr. Flint's conclusions:

As a rule, the disease runs a shorter course in females than in males.

It is almost universally fatal when developed during pregnancy.

It is of shorter duration when occurring in patients over thirty years of age than when developed at an earlier period.

Intemperance does not seem to have any effect in shortening its course.

Contrary to the opinion generally entertained, he believed that phthisis, in a certain number of cases, tends to progress towards a favorable termination, and hence he had not infrequently found physicians who, when their patients recovered, thought they must have made an error in diagnosis. In eight out of forty-four cases of recovery there had been no medical treatment of importance, and no change in the habits of life, and the cure seemed to be really due to an intrinsic tendency in the disease itself. Five of these patients were men, and three women, and of the former all were under thirty.

Two sisters recovered without special effort, who were the only surviving members of a large family which had been cut off by consumption. In the case of the others every available means, such as change of climate, sea-voyages, etc., had been tried in vain.

In six out of thirty-one cases in which the

* 5 Watt and Sergeant, 266.

† The witness is entitled to the right—and should insist upon it—of having the question fairly and clearly stated. And he should not attempt an answer until he fully comprehends its bearing.—Elwell, op. cit., p. 309.

disease was arrested there was no treatment employed, and the patients lived from seven to twenty-seven years afterwards. There was also no treatment in one case which was slowly progressing, and in fifteen which proved fatal in the ordinary time. An analysis of all Dr. Flint's cases goes to show that nearly twenty per cent. of patients with phthisis will recover, that in something over nineteen per cent. the disease will be arrested or progress very slowly, and that in fifty-one per cent. it will be fatal; but he regards their number as too few to base any general conclusions upon.

In some instances recovery seems to depend in a great measure on the resolute determination of the patient himself. In speaking of the influence of hygienic treatment, such as a change in the manner of life, out-door exercise, etc., Dr. Flint mentioned that out of forty-four recoveries in fifteen of the cases there was simply this hygienic treatment employed without medication. In the case of ten out of thirty-two patients in whom the disease became arrested or non-progressive, the same means had been made use of to the exclusion of medicine; and of his fatal cases the same was true in twenty-three. In general, he has found that the duration of the course of the disease is nearly twice as long in those cases in which hygienic treatment is employed as in those in which there is neither hygienic treatment nor medication; or in the proportion of fourteen to eight.

He then devoted a few minutes to the consideration of the relative merits of various hygienic measures, like the following:

(1) Temporary change of climate. Is usually attended by a certain amount of benefit.

(2) Change of habits. Seems to exert a more favorable influence than any other one measure.

(3) Change of residence (from city to country, etc.).

(4) Change of occupation.

(5) Long sea-voyages. Often of the very greatest service.

The results of his observations on this subject have gradually induced him to feel less and less confidence in the beneficial effects of any climatic influence alone.

In regard to medicinal treatment, cod-liver oil had proved exceedingly useful in eighty-four cases, and alcohol in seventeen. The hypophosphites had been faithfully tried in sixteen cases, but he had never seen any special benefit from their use.

Dr. O'Sullivan, who stated that he had had twelve years' service in the department of diseases of the chest at the Eastern Dispensary, said that he had constantly observed that a change in the habits of life always had a beneficial influence on cases of phthisis, and mentioned the case of an Irishman, accustomed to work in a foundry, who had been given up as hopelessly ill. Having saved up a little money, however, he was recommended to go back to Ireland on a sailing-vessel, which he did, remaining on the other side for some time. On his return it was found that the disease had been completely arrested, and he afterwards made a good recovery. On the other hand, Dr. Sullivan said he had never seen a case where the patient was closely confined by his or her occupation (like school-teachers, for instance) in which the disease was not progressive.

Dr. Alfred L. Loomis proposed the question, "What is pulmonary phthisis?" He was accustomed to recognize three distinct forms of disease, which were all known as consumption, viz.: (1) catarrhal, (2) tuberculous, (3) bronchial or fibrous. When the second variety existed he considered his patient's doom as sealed. In the catarrhal form a certain proportion of cases tend towards recovery. When a patient presents himself in whom phthisis is suspected, he always questions him very closely as to the origin of his trouble, and if he finds that at first there was an ordinary catarrh, whether nasal, pharyngeal, laryngeal, or bronchial, and that emaciation did not set in until some time afterwards, he is pretty certain that he has not a case of tuberculosis to deal with. If, on the other hand, there has been progressive emaciation from the first, with a hacking cough without expectoration, and no catarrhal symptoms, he at once recognizes the more grave condition.

Then there is what is known as "century" phthisis, characterized by fibrous indurations, with dilated bronchi and resulting cavities.

Dr. Loomis considered it unfortunate that the profession was not more at one in regard to the diagnosis of these various conditions. For instance, a case may present himself to him (Dr. Loomis), and, finding that he had a broncho-pneumonia of limited extent, resulting from catarrh, he would tell him that he had not consumption, but that he was in such a condition that it might possibly set in. Afterwards the patient might go to another physician, who would tell him that he was already in the first stage of consumption, and who, if he eventually got well, would regard it as a case of recovery from phthisis. It seemed highly important, therefore, that medical men should agree as to what is really meant by the signs of incipient phthisis.

It was noticeable that Dr. Flint had not been present when Dr. Leaming read his recent paper on consumption before the Academy, some account of which was given in my last letter to the *Medical Times*, and that Dr. Leaming was not present on this occasion to hear Dr. Flint's paper.

At one of the November reunions of the Medical Journal Association, Dr. A. D. Rockwell read a paper on the "*Differential Indications for the use of the Faradic and Galvanic Currents.*" In order to find these out, he said, not only was a physical and physio-

logical knowledge of the currents necessary, but there was much that could be learned only by practical experience. It had been generally supposed that galvanism was the more useful in the relief of pain; but he had found by experience that in a large number of instances the faradic current was very greatly superior in this respect. In some cases of disease it is impossible to get a good result without employing both currents. In general, he stated that the faradic current should be regarded as strongly tonic, and that the galvanic was more capable of acting upon the central nervous system, as well as exciting nerve-irritability in paralyzed muscles. Asthenopia was among the few distinct diseases which would be benefited by faradism alone, while galvanism alone was to be employed in the treatment of spinal irritation, some of the sequelæ of cerebro-spinal meningitis, and most of the skin diseases in which electricity is useful. In herpes zoster the relief of pain by it is magical. For the relief of the various forms of paralysis, in which electricity has won so deserved a reputation, both currents must be used interchangeably, according to circumstances. In concluding, Dr. Rockwell spoke of the marked tonic effect upon the system of the method of central or general faradization.

The annual meeting of the society was held December 1, when Dr. C. M. Allin was elected President, and Drs. Robert F. Weir and R. F. Walker First and Second Vice-Presidents respectively.

At the November meeting of the County Medical Society the following resolution, reported on favorably by the comitia minora, was adopted by the Society:

"*Resolved*, That the Medical Society of the County of New York recommends to its members the use of the metric system in their prescriptions." In consequence of the above the Secretary was ordered to notify the druggists of the city that they would be liable to have prescriptions sent to them written according to the metrical scale.

Dr. Erskine Mason then reported and exhibited two successful cases of *hip-joint amputation*, the one in an adult male, and the other in an adult female. The first operation was performed on account of an atrophied and useless limb, which was a constant source of annoyance to the patient, and the other on account of the existence of extensive osteo-sarcoma. The operation used in both instances was the circular one. Both patients had gained in weight since the amputation; the lady not less than twenty-five pounds, though but a comparatively short time had elapsed.

Later in the evening, Dr. Alpheus B. Crosby read a sketch of the lives of five eminent medical men who practised one hundred years ago, viz., Josiah Bartlett, Matthew Thornton, Joshua Brachett, Lyman Spaulding, and Nathan Smith, the first two being signers of the Declaration of Independence. It was stated of Dr. Bartlett that he had treated the disease now known as diphtheria with marked success by means of antiseptics and large doses of Peruvian bark, and of Dr. Smith that he was the founder of the medical department of Dartmouth College, that he early performed ovariotomy, without any knowledge of Dr. McDowell's having previously done it, and that he treated typhoid fever by cold affusions, fresh air, and a nourishing liquid diet.

At his last clinic at Bellevue Hospital, Professor Sayre presented several cases of great interest. The first two were cases of *hip-joint disease*, in which he had recently performed exsection, but which had at this time been taken out of the wire cuirass, so that the children were now able to walk about with some little assistance. The first case was that of a little girl who had been almost *in articulo mortis* when the operation was performed, and would undoubtedly have been dead before this had her life not been thus rescued. Notwithstanding the fact that, owing to the excessive suppuration, waxy degeneration of the liver and kidneys has been plainly indicated in her case, the patient is now picking up in the most wonderful manner. In the case of the other child, Dr. Sayre said the operation had proved the most difficult that he had ever performed, on account of the extensive loss of bone and the extraordinary thickness of the involucrum which had been formed in nature's efforts to remedy the existing trouble. The parents stated that the whole amount of suppuration since the operation was not equal to that which previous to it had taken place in a single day; and the patient was now as fat and rosy a little fellow as one could wish to see.

The next case presented was one of exceedingly firm fibrous *anchylosis of the knee-joint*, which had been previously given up as hopeless by two of the most prominent surgeons in the city, but which Dr. Sayre had succeeded in breaking up at his last clinic, a week before. In order to impress the class with the importance of the after-treatment, the dressing was left on the limb two or three days longer than it would otherwise have been, and was now removed in their presence. There had not been the slightest rise in temperature, and the patient had been entirely comfortable ever since the operation, it being quite unnecessary to administer any morphia or anodyne. Dr. Sayre attributes his remarkable success in these cases mainly to three cardinal points in the after-treatment, viz., moderate pressure over the principal artery supplying the part, in order to diminish the supply of blood, firm bandaging, and a sufficient amount of extension constantly kept up. In the present instance compression over the femoral artery, in the lower third of the thigh, was made by means of a small piece of sponge, care being

taken that this should not be so great as to run the risk of setting up gangrene. From this time daily manipulation of the joint, with *massage* over the adjacent muscles, was to be practised until a complete cure should be effected.

The case following was that of a young woman who had had *anchylosis of the elbow-joint*, but who, thanks to the efficient treatment which she had received, had now almost entirely recovered.

Dr. Sayre now presented two little boys who had been suffering from *reflex paralysis* and lack of co-ordination, but upon whom he had recently performed *circumcision* with the happiest results; and then proceeded to do the same operation on a third in presence of the class. The latter was a child nearly two years of age, who had never walked and never talked, and had always been regarded as hopelessly idiotic. He was constantly tossing about in the most restless and unnatural manner, and it was noticed that whenever he did become quiet for a time his legs would be crossed. There was also marked strabismus. The parents stated that sometimes he would scratch and tear himself with his nails until the blood flowed, and that at other times he would beat his head against the wall or floor when permitted to do so. The case was brought to the clinic by Dr. Hoffman, of West Chester County, who had formerly exhausted every means of treatment that he could think of, but for a long time had given up all idea of causing any improvement in it. Recently, however, he had read a report of a lecture by Dr. Sayre on cases similar to this, in one of the medical journals, and it at once occurred to him that possibly this poor child, whom he had long regarded as actually crazy, might be cured by the simple operation of circumcision. The parents stated that the boy was subject to frequent priapism, and it was found that when pressure was made with the finger upon the glans penis an instantaneous spasm was communicated throughout the whole system, and his hands would be slapped with violence against the face. It is a remarkable fact that immediately after the operation the child seemed to recognize its mother (for the first time in its life), and then articulated one or two words. The next day it could both walk and talk.

On the 7th there was quite a gathering of the lights of the profession (principally surgical), as well as an unusually large number of students, in the amphitheatre at Bellevue, to see Dr. Thomas Sabine perform gastrotomy. Among those present were Drs. Wood, Markoe, Mott, Jacobi, Frank Hamilton, Dalton, Sayre, Darby, Sands, Howe, Briddon, Weir, Keyes, and Henry. First, Dr. Sabine gave a very neat little lecture on the case and the operation he proposed. The patient had been admitted to the hospital November 22, and stated that it was two years since he first experienced difficulty in the passage of food to the stomach, and that the trouble had been increasing pretty constantly ever since. After many careful and prolonged examinations it had been concluded that the stricture of the œsophagus which was found was due to cancer, and that gastrotomy offered the only reliable chance of rescuing him from starvation. After describing the method and dangers of the operation, and relating the statistics on the subject, Dr. Sabine stepped out to see whether his patient was ready for him to commence, but returned in a few minutes looking rather blank, and made the unexpected announcement that the man had stopped breathing after the first few whiffs of ether. In a little while, however, he was revived; but Dr. Sabine did not deem it safe to undertake the operation, and Professor Wood announced to the students present that the man was *not dead*, and that ether did *not* kill him.

PERTINAX.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, NOVEMBER 6, 1876.

The PRESIDENT, DR. H. LENOX HODGE, in the chair.

Left lung and heart, with fenestrated pulmonary leaflets, and peculiar growth on one of the tricuspid leaflets, from a case of phthisis. By Dr. LOUIS STARR.

J. R., æt. 31, a sailor, was admitted to the medical ward of the Episcopal Hospital on July 6, 1876. He had never been intemperate in his habits, but when a very young man had contracted venereal disease, and at intervals afterwards had suffered from constitutional syphilis, manifested chiefly by falling out of the hair, eruptions on the skin, and sore throat. In other respects his health was good up to the spring of 1874, when he began to be troubled with a dry, hacking cough, had several slight attacks of hæmoptysis, and lost appetite, flesh, and strength. From this time, though there was a short period of improvement during the summer of 1875, his condition slowly grew worse, and he was obliged to give up work about one month before coming into the hospital. When admitted, he was considerably wasted in flesh, and quite weak; his appetite was poor, there was some tendency to diarrhœa, and well-marked hectic fever and colliquative sweating. He complained also of dyspnœa on exertion, and of pain in the left chest, the latter located for the most part in the mammary region, but at times extending from this position around the chest towards the angle of the scapula. His cough was frequent and annoying, and was

attended with a copious expectoration, the sputa being nummular, muco-purulent, and occasionally streaked with blood. An exploration of the chest revealed the physical signs of a large cavity in the upper lobe of the left lung, while over the lower lobe numerous moist crackling râles were heard. The right lung appeared to be healthy, with the exception of the portion corresponding to the infraclavicular and upper part of the mammary regions, where there was dulness on percussion, together with harsh respiration and moist, crackling râles. The first sound of the heart was somewhat feeble, but no murmur could be detected. The urine was voided freely, and was normal in composition. After the patient's admission, the pulmonary lesion progressed uninterruptedly, and death occurred, without the appearance of any unusual symptom, on October 29.

The *post-mortem* examination was made twenty-four hours after death. On opening the thorax the left lung was found to be firmly bound to the chest-walls by old pleuritic adhesions, and was removed with great difficulty. The whole of the superior two-thirds of its upper lobe was converted into a large cavity, lined with a smooth membrane, and having extremely attenuated walls composed of a thin layer of condensed lung-tissue and the thickened pleura, and being in places, as over the anterior surface, scarcely two lines in thickness. In the lower third there were two cavities, each about the size of a walnut, having irregular walls, and being surrounded by indurated pulmonary tissue. All of these cavities were partly filled with a purulent fluid. The lower lobe was indurated, contained numerous small cavities, isolated deposits of cheesy matter, and collections of miliary tubercles, and the bronchial tubes traversing it were dilated. At the apex of the right lung there was a moderately large anfractuous cavity, and throughout the remainder of the lung a number of the small masses of caseous material in various stages of degeneration. The heart was small and slightly flabby; there was no alteration in the relative size of its chambers, and the aortic and mitral valves were perfectly normal. The posterior and right leaflets of the pulmonary valve, however, were fenestrated; and attached to the auricular surface of the anterior leaflet of the tricuspid valve, at a short distance from its free margin, was a round, moderately firm, reddish-brown body, about the size of a pellet of No. 4 shot. The liver was enlarged and fatty. The kidneys were healthy.

Fluid from abdominal cysts. By Dr. H. LENOX HODGE.

One was taken from a unilocular cyst containing nineteen pints. The fluid in small quantity had the appearance of ordinary water. In bulk there was a very light straw color to it. Its specific gravity was 1007. It does not contain albumen.

The other was taken from one large cyst of a multilocular tumor. This cyst contained thirty-four pints of fluid. It is almost as colorless as water, and as it ran from the canula during the tapping had very much the appearance of starch-water. Its specific gravity was 1008. It does not contain albumen. The other cysts of the tumor were not tapped. Some of them are filled with very thick semi-solid contents.

The microscopical examination of these fluids will be very interesting, as both of the cases will possibly sooner or later require the operation of extirpation. The presence or absence of the "so-called ovarian cell" as a diagnostic sign can thus be tested by members of the Society. The specimens were referred to the special committee on ovarian fluids.

SOCIETY OF PRACTICAL PHYSICIANS OF ST. PETERSBURG, RUSSIA.

OPINIONS ON THE STANDING OF THE AMERICAN MEDICAL PROFESSION.

ON the 28th of September a communication was made to the Society of the Practical Physicians of St. Petersburg by Dr. Wiwodzow, who was ordered to Philadelphia by the medical department of the Russian Ministry of the Interior, and for this purpose received more than three thousand dollars. It was entitled "Communication on a Visit to the World's Exhibition at Philadelphia." The doctor said that he had become thoroughly acquainted with the organization of the medical institutions, and had come to the saddest conclusion with regard to them. He said that the medical sciences were utterly neglected, that young men entered the Universities entirely unprepared for a medical study, and that, besides this, the whole course extended only over two years. Most unfavorable were his impressions of the Women's Medical College. He said that the medical knowledge of the female physicians displayed the greatest deficiency; that they have no success whatever, and only very little practice; that they are never admitted to prominent or public positions in societies, nor asked to take part in consultations with male physicians.

In response to the appeal of the chairman, Prof. Rudenew said, *inter alia*, "To us Russians, and, in fact, for all Europeans, it was very interesting to become acquainted with the standing of the medical profession of that country, where the conditions for the development of medical science, indeed where all the social relations, differ so essentially from the European. The difference consists principally in the fact that in America the medical institutions have their origin in private enterprise, without any meddling of the government and

without any assistance from the public funds, and are conducted by private individuals. From these important circumstances it is easy to explain the existence of the large number of different medical schools, which are not bound by any legal regulations. There is in Philadelphia one especially devoted to women. And in reality the American female physicians are distinguished for their scientific study. The professors of this school are for the most part women; the female clinical lecturers have extended practice. The most medical schools of America are distinguished for the good character of their arrangements, and for the entirely satisfactory organization of their lecturing method and the programme of the branches. Dr. Wiwodzow's statement that in all American medical schools the course extends over only two years is incorrect. In the Women's College and in several others the course is decidedly three years. That the education of the student is thereby finished is not true. The students usually do not leave the college immediately after graduation, but carry on their education especially in the numerous excellent hospitals of that country, where admission is everywhere free to them. In this manner they become usually good practical physicians. In connection I may state that the American student in general spends a larger number of hours daily in study than any other student in the world.

"In consequence of this complete freedom in the matter of education, and in consequence of the fact that all medical institutions, as above stated, have their origin in private means, often in fact through voluntary contributions, there are besides the general medical schools also those in which only one branch of practical medicine is taught. As instances I can mention the dental and orthopædic institutions. In artificial teeth and limbs, hands, fingers, etc., the American physicians cannot be excelled. It is worthy to remark that Americans have toothache much more frequently than other nations, probably from the very enormous use of ice. Likewise the number of maimed persons is astonishing,—probably the result of injuries received from machinery, which in that country is developed to an immense extent. These evils have therefore given rise to the specialties of artificial teeth, limbs, etc., which can almost be used as living members."

Further, Prof. Rudenew spoke very favorably of the International Medical Congress in Philadelphia. On the general character of the proceedings of the Congress he remarked that in the working of the American physician a greater practical utility reigns paramount; of work based on experiments comparatively little was brought forward. The American physicians in general do not investigate diseases experimentally; they merely observe and treat them; and in this they have achieved many important results. F.

REVIEWS AND BOOK NOTICES.

CLINICAL STUDIES. By SIR JOHN ROSE CORMACK, K.B. Philadelphia, Lindsay & Blakiston, 1876. 2 vols. 8vo, pp. 548, 579.

Although bearing an American imprint on the title-page, both the appearance and the colophon show this to be an English book. It consists mainly of various papers published in medical journals from 1837 to the present time, and now collected in book form, with some additions. There is a curious mixture of subjects,—surgical, medical, and obstetrical. Thus, we find one paper on a "successful resection of the shoulder-joint;" several on fevers, on diphtheria and its sequels; and others on puerperal convulsions, dystocia from cystous kidney, and the value of the dark abdominal line as a test of recent delivery. The author has been a prominent practitioner among the English residents in Paris, and this fact, together with his very creditable connection with the "English Ambulance" of Sir Richard Wallace during the two sieges of Paris, probably accounts for his varied experience. We must confess that we feel disappointed after having read the volumes with considerable care. The essays were good in their day, no doubt, but they are mostly of a past age in their pathology. They contain little of anything that is novel in clinical facts, in methods of treatment, or in philosophical deductions. They are just such a collection of "clinical studies" ("clinical records" would have been a better name) as any respectable practitioner of forty years' experience could publish. They have been published already in the journals, and, except for more convenient reference and a certain and perhaps pardonable feeling of personal gratification, they might as well have been left to slumber there.

To this stricture, however, we ought to make some exceptions. The paper (vol. i.) on hernia of the uterus is a valuable contribution in the way of a collection of cases from generally inaccessible sources. He narrates two cases of hernia of the unimpregnated uterus and four (he says five, but only records four) of the pregnant uterus. In the latter the fœtus was extracted by operation at full term, with the unexpected but instructive result of saving all the children and three of the mothers. The paper on chronic poisoning by chloroform is also valuable, especially as it contributes the history of a case of recovery from almost fatal chloroform narcosis by inversion of the body,—a method of treatment which no one will be apt to forget or neglect after reading this case or the dramatic description of a similar one by Marion Sims.

In the earlier papers Dr. Cormack is scrupulously careful to give even the minutest directions in Latin, and on nearly every page we find such directions as "Quiescat," "Surgat

è lecto hodie per horam unam," "Abradatur capillitium; et applicetur aqua frigida diligenter toti capiti donec capitis dolor mitescat," etc.,—an apparent pedantry which he outgrows in his later cases. It is surprising, therefore, to find him speaking (ii. 452) of "one of the *court-martials* . . . at Versailles."

W. W. K.

GLEANINGS FROM EXCHANGES.

SIGNS OF PNEUMONIA OF THE APEX IN CHILDREN (*The British Medical Journal*, November 4, 1876).—According to L. Fleischmann (*Wiener Med. Presse*, No. 20, 1876), the following symptoms are connected with commencing or already existing pneumonia of the apex in young children, in whom it is often difficult of detection by physical signs. The symptoms are always unilateral on the same side as the affected lung. 1. Swelling of the lymphatic glands of the neck, nape, and submaxillary region, without apparent local cause. These swellings are in direct proportion to the extent of the pulmonary affection. Infiltration of the glands before and behind the ears has no connection with the lung-disease. 2. Obstinate, often-recurring scrofulous conjunctivitis; some forms of unilateral scrofulous keratitis. 3. Recurrent eczema of the half of the face or head. 4. Certain forms of disorder of the sympathetic system; pallor, redness, erythema of the cheeks and temples, pressure-erythema. Similar conditions are also met with in cerebral diseases, the absence of which must be ascertained. In several cases also of cerebral tubercle, Fleischmann has found infiltration of the apex of the lung on the same side. 5. Intermittent neurosis of the sympathetic; redness and increased temperature of the skin on the affected side. 6. Neuralgia of the fifth nerve; neurosis of the oculo-motor and vagus nerves.

TRANSFUSION (*The Medical Examiner*, November 2, 1876).—At a meeting of the Royal Medical and Chirurgical Society, Dr. Roussel, of Geneva, demonstrated his apparatus for the performance of direct transfusion from vein to vein, the object of which is to prevent the coagulation of the blood that is drawn, and therefore to do away with the necessity of defibrination: it is composed wholly of hardened pure caoutchouc, which, unlike ordinary vulcanized caoutchouc, has no effect on the blood. Dr. Roussel's instrument is made up of a tube with a Higginson's syringe in its course, the alternate compression and expansion of which allow an uninterrupted flow of blood to take place; the bulb is perfectly smooth internally, and has a capacity of ten grammes, so that the quantity of blood transfused can be exactly measured. The tube communicates with a rigid cylinder, open at each end, and applied over the seat of the vein required to be punctured; the cylinder is fixed to the arm by being surrounded by a rigid cup, which can be exhausted by an elastic pump in connection with it. The cylinder within it is then closed by the introduction at its upper extremity of a scarificator, the exact depth of which can be regulated. At the moment of operating, this lancet is depressed into the vein. Before, however, this is done, all air is driven out of the cylinder and tube by filling these with tepid water, by means of the ball-syringe and a second tube entering the cylinder opposite to the conducting tube. To the extremity of the latter a mouth-piece provided with two canulæ is attached. One of them is introduced into the vein of the recipient. At the junction of the canulæ is a stopcock to direct the flow of fluid into one or other of them. The apparatus being filled with water, the vein is opened by the scarificator, and the contents of the cylinder and tube pumped out. The water being expelled through the free canula until blood only flows from it, the stopcock is turned, and the blood is injected into the patient's arm.

DISLOCATION OF THE NECK.—Dr. Charles Orton reports (*London Lancet*, December 16) the autopsy on a man who had died from a dislocation. It was a pure and total dislocation between the atlas and axis; the head, to which was attached firmly the atlas, was thrown forwards, the odontoid process thus pressing on the front of the cord and causing instant death. The posterior and other ligaments connecting the atlas and axis and axis and occipital bone were ruptured, but there was no fracture, not even of the odontoid process, and no rupture of the transverse ligament.

The eye-witnesses stated that the man was stooping forwards, with the chin slightly turned to the left. The blow was delivered under the right angle of the jaw by the right-hand fist, partially from behind, and partially sideways, to the deceased, who fell towards the left, but backwards, and "seemed dead at once." He never moved after falling.

ABDOMINAL SECTION.—Mr. Thomas R. Jessop, of Leeds, and Dr. James Edmunds, of London, report (*Lancet*) two cases of abdominal section performed in the London Temperance Hospital, each resulting successfully, both as regards the mother and child. Mr. Jessop's case, by far the rarer, indeed almost unique, was one of extra-uterine gestation, the child being lodged in the midst of the bowels, the placenta covering the outside of the fundus of the uterus and the inlet of the pelvis like the lid of a pot. The uterus was, of course, not opened; its cavity measured only two and a half inches. The placenta was not removed. Great pains were taken to leave it untouched, and to leave an opening in the lower part of the abdominal wound for the escape of placental débris and other discharges. Dr. Edmunds's case was

one in which the Cæsarean section was necessitated by the existence of a large tumor filling the pelvic brim and cavity. The patient had been in labor sixty hours, for twenty of these in hard expulsive labor without any progress.

A CASE OF AORTIC ANEURISM TREATED BY ELECTROLYSIS; FAILURE.—Dr. John Homans reports the following case (*Boston Medical and Surgical Journal*, November 16, 1876). A man fifty years of age was admitted to the hospital with an enormous aneurism of the arch of the aorta. The tumor had pushed through the walls of the thorax in the left upper pectoral region, forming an external pulsating swelling as large as a man's fist. Five gilded needles, insulated to within a quarter of an inch of the point, were inserted into the sac of the aneurism; the needles were pushed inwards about an inch and a quarter beneath the skin, and when all were inserted they described a circle round the apex of the tumor. The battery used was an ordinary Stöhrer's, the needles being connected with the positive pole, while the negative pole was joined to a large metallic disk which was covered with a compress wet with salt and water. This was applied to the epigastric region, and moved about occasionally as the skin beneath it became irritated. The number of cells used varied from eight to ten, which were all the patient could bear without much pain. The needles were kept in the aneurism during forty minutes, but since after a time the skin around some of them became slightly discolored, either bluish or pale, and somewhat sunken over a circle about two millimetres in diameter, these were removed and fresh ones (of steel) were inserted at neighboring points, ten punctures being made in all. Bubbles of gas and a little dark blood followed the needles as they were withdrawn. The patient bore the operation well, but became a little faint afterwards. The next day the pain through the back and down the arm was less. The tumor looked somewhat blue. Two weeks later electrolysis was repeated; the tumor was then somewhat larger than when the patient entered the hospital. The operation was repeated in a manner similar to the first, excepting that steel needles were used. The depths at which the needles were inserted were from one and five-eighths to two inches.

The patient left the hospital at the end of three weeks, convinced that his pain was less than when he entered. The tumor, however, was larger, and the impulse was about the same.

PHOSPHORUS IN LEUCOCYTHÆMIA.—At an extended discussion of the use of phosphorus in leucocythæmia in the London Clinical Society, the result arrived at was unfavorable. The nearest to recovery under its use was in a case of Dr. Broadbent of the lymphatic form of the disease. In this the patient seemingly got well, and remained so until carried off by intercurrent disease, which reminds one of the horse that was taught to live upon a straw a day, but unfortunately died of an intercurrent affection before he got to the point of subsisting without rations. One or two cases of improvement were detailed, but the record was mostly of dreary failure. Dr. Moxon's experience was the most extensive, and was of the most cheerless character, as in no one of thirty cases had any good resulted from the use of phosphorus.

DEATH FROM CHLOROFORM.—In the issues of the *British Medical Journal* for November 11 and December 16 are recorded cases of death occurring in boys during chloroformization. In both cases the operation for section of the hamstrings was being performed. In both cases inversion of the body was practised, but produced no good results.

GOUTY DELIRIUM.—Dr. T. Churton reports (*British Medical Journal*, December 16) cases of gouty delirium, of which the following is selected as typical:

CASE II.—A gouty officer aged 82. In March, 1874, he had bronchitis, and some arthritis and urinary trouble. During treatment, delirium came on. He was violent, accused his relatives of various crimes, though previously upon the most affectionate terms with them; absolutely refused medicine; and was, in fact, excessively troublesome. The pulse was bounding and regular; the delirium was active; he shouted, not muttered. It was necessary at length to force open his teeth (many of which remained) by means of a strong spoon, and to introduce upon the handle of another spoon a mixture of calomel with powdered gum, which he tried very hard to spit out, but could not. Twelve hours after this, the calomel had had no effect, the delirium was muttering, and the pulse irregular and weak; but shortly afterwards there was a large fluid offensive evacuation, and he began to mend immediately. The diet was regulated, and he was recovering quickly, when one day he talked too long with a friend, and a garrulous delirium succeeded, with insomnia. Again he would take no medicine. He was not febrile; his bowels were clear; therefore ten grains of chloral were given in some porter which he wished for. He then slept for several hours, and awoke free from delirium. This occurred a second time. He is now (1876) in good health for his age, but vision is impaired.

Dr. Churton states that he has never seen gouty delirium in persons under forty-five years of age.

MILK DIET.—In the London *Lancet* for December 16 is a clinical lecture by Dr. Geo. Johnson on the use of milk diet, which he commends most highly in chronic diarrhœa, dysentery, and acute Bright's disease. The chief stress is, however, laid upon the value of the method in ***acute and chronic cystitis***,

and one case of rapid and complete cure in a very severe case of two years' duration is reported. The method of administration is as follows:

The milk may be taken cold or tepid, and not more than a pint at a time, lest a large mass of curd, difficult of digestion, form and collect in the stomach. Some adults will take as much as a gallon in the twenty-four hours. With some persons the milk is found to agree better after it has been boiled, and then taken either cold or tepid. If the milk be rich in cream, and if the cream disagrees, causing heartburn, headache, diarrhœa, or other symptoms of dyspepsia, the cream may be partially removed by skimming. One reason among others for giving the milk, as a rule, unskimmed—that is, with the cream—is that constipation, which is one of the most frequent and troublesome results of an exclusively milk diet, is, to some extent, obviated by the cream in the unskimmed milk. As a rule, it is unnecessary, and, therefore, undesirable, to add bread or any other form of farinaceous food to the milk, which in itself contains all the elements required for the nutrition of the body. When the vesical irritation and catarrh have passed away and the urine has regained its natural character, solid food may be combined with the milk, and thus a gradual return may be made to the ordinary diet, while the effect upon the urine and the bladder is carefully watched.

There are some patients with whom, unfortunately, milk in any form, and even in small quantities, so decidedly disagrees that it is for them as unsuitable a diet as any other form of indigestible food would be.

The doctor also suggests the employment of the milk diet as a preparation for the operation of lithotomy, and states that he has seen two cases in which the vesical irritation and catarrh resulting from a stone in the bladder were much mitigated by the milk diet, the patients being thereby brought into a more favorable condition to undergo successfully, the one the operation of lithotomy, the other that of lithrotrity.

Intestinal Obstruction of Eighteen Weeks' Duration.—Dr. John G. Blake reports, in the *Boston Medical and Surgical Journal*, November 23, 1876, the case of a man who was suddenly attacked by total obstruction of the bowels, without pain or fever, lasting eighteen weeks and finally resulting in death, probably from starvation.

During the course of the affection much relief was gained and the patient's life undoubtedly prolonged by the use of the aspirator to remove accumulated flatus. This was used at first every few days, later several times every day, the patient himself learning to insert the tube and some member of the family performing the operation of pumping.

The size of the tube used was the smallest No. 1 *filière* charrière, one-third of a millimetre in diameter.

Simple Treatment of Quinsy.—Leslie Thain (*Canadian Medical Journal*, 1876, p. 413) believes gargles of alum, tannic acid, and such similar astringents useless for the purpose of astringing the vessels sufficiently to "press back" the inflammation. His plan is to apply externally hot fomentations (with a few drops of turpentine) to the throat, and then to wrap up the whole neck in flannel. Constant heat, moisture, and mild counter-irritation are to be kept up by frequent changing of these applications. The feet must be at once put in a hot mustard bath, and if the patient will then get into bed between blankets, so much the better.

Gargles as hot as can be borne must be begun as soon as possible, and the most useful is a solution of carbolic acid, one part to forty of water. If the patient cannot gargle, carbolic acid in glycerin (one to twenty or thirty) should be frequently applied by means of a feather to the parts. A brisk saline aperient may be advisable. By following this plan of treatment the inflammation subsides in a few hours, never running on to suppuration, and then a simple alum gargle may be serviceable.

MISCELLANY.

The well-known scientific periodical published in Germany under the name of Dubois-Reymond and Reichert's *Archiv*, and formerly as Meckel's and subsequently as Müller's *Archiv*, is to be divided into two parts. One is to be devoted to physiology, and will be edited by Dubois-Reymond and Ludwig; the other to anatomy, under the management of Braune and His.

Contagiousness of Diphtheria.—A whole family, consisting of father and mother and two children, were attacked with the disease, and carried off in a short time. The attending physician, Dr. Regnault, died in twenty-four hours. Dr. Biset, who attended Dr. Regnault, was then attacked, and expired after a very brief illness. Further, almost every servant connected with the family is also dead of the disease.

Colliquative Diarrhœa.—Dr. Bonfigli recommends most highly chlorate of potassium in colliquative or nervous diarrhœa without intestinal lesion. He advises the increase of the dose until a beneficial effect is observed, beginning at half a drachm in the twenty-four hours, and increasing to two or three drachms if requisite.

Transfusion.—A unique case of transfusion occurred December 9 at the London Hospital. The well-known surgeon, Mr. Adams, performed amputation at the hip-joint. The patient, after the removal of the limb and the securing of the arteries, showed

signs of succumbing. Dr. Adams bared his own arm, and allowed about seven ounces of blood to be transfused, with the result of reviving the dying man. He then proceeded to the completion of the operation, and finally sent his patient back to the wards.

Dr. Lyon Playfair aided the Duchess of Edinburgh in her late performance of domestic duties at Malta.

NOTES AND QUERIES.

Mr. Editor,—I should be glad to see published in the *Medical Times* what I send you, copied from an English newspaper. There is not a medical practitioner in this city who cannot give instances of gross mistake or of improper conduct on the part of those who put up his prescriptions. I know myself of one that occurred within a few days, where no iodide of potash whatever could be detected in a bottle that was doing no good, very much to the prescriber's chagrin. He had expected the effect of ten grains in each teaspoonful.

It is not a month since I went myself to a shop kept by a very prominent member of the College of Pharmacy, in order to get a copy of a prescription which had been refused my patient *because the prescription belonged to the apothecary*. As the patient resided in New York, this view of things would be attended with some slight inconvenience when her bottle needed refilling. While taking a copy for myself, with an air of some embarrassment the apothecary informed me—for I had not told him why I wished to see the prescription—that he had substituted another substance for one of the ingredients that he did not have in his shop.

I was refused on one occasion a half-ounce of brandy, although it was for my own wife, who was in a fainting condition, "because liquor was not dispensed over the counter," by a concern that recently sold four ounces of laudanum to a man in a state of intoxication, with which the poor fellow destroyed his life.

I need go no further, for every one of your readers has had experiences similar to my own.

On some accounts it is disagreeable to declare a decided preference for certain apothecary-shops, but no medical practitioner should hesitate to tell his patient where he *must* go to have his prescription put up. He owes this to himself, to his patient, to his profession, and to the community at large.

Most respectfully yours,

'50.

DRUGGISTS AND DOCTORS' PRESCRIPTIONS.

Mr. William Thomson, F.C.S., recently read an elaborate paper before the Literary and Philosophical Society of Manchester, entitled, "On the Degree of Accuracy displayed by Druggists in the Dispensing of Physicians' Prescriptions in different Towns throughout England and Scotland."

Mr. William Thomson tells us that his attention having been called to the results obtained by Mr. Allen, Public Analyst of Sheffield, with regard to the inaccuracies of druggists in making up prescriptions, he determined upon an investigation in different parts of England and Scotland. He submitted two very ordinary prescriptions to no less than eighty-one druggists of every position in various towns of Scotland and England, from Inverness to Liskeard in Cornwall. The prescriptions made up were most accurately analyzed. The results are most carefully exhibited in successive tables drawn out in the course of the memoir, and are summarized by Mr. Thomson as follows:

"In looking over the above table it will be seen that only two druggists out of the eighty-one have given exactly the required weight of the potassium iodide; thirty-four have given *more* than the prescribed amount, and forty-five *less;* but it may be of further interest to notice that when the whole of the quantities of potassium iodide given by the eighty-one different druggists are added together, the total quantity comes to two hundred and twenty and a half grains *less* than it would have been if each druggist had dispensed the exact quantity."

Some of the cases are startling. We see in the table that a druggist in Oldham gave in an equal quantity of fluid only 60.5 grains of potassium iodide instead of 120 grains; and more shocking still, one in Loughborough gave only 44.2 grains! In the zinc sulphate ointment a "low" druggist in Altrincham gives actually 8.1 grains of the sulphate instead of 40 grains, or one-fifth of the right prescription! Mr. Thomson continues:

"Not one dispenser has succeeded in making the prescription to the exact strength in either the mixture or lotion."

Against this charge of inaccuracy it may be urged that the accuracy required by the author of the paper is exaggerated, and that no druggist ought to be expected to dispense within anything like scientific limits of error. To this Mr. Thomson replies:

"With a view to decide what amount of inaccuracy a pharmacist would consider allowable, I consulted a gentleman who is a partner in an establishment which does a considerable business in dispensing. After informing him of the investigation I had been making, I asked him what amount of inaccuracy he would consider allowable in dispensing 120 grains of potassium iodide in six ounces of fluid, and also for 40 grains of zinc sulphate in two ounces of fluid. He considered that in both cases they ought to be absolutely accurate, but if I allowed three-tenths of a grain either way I should be allowing sufficient for all practical purposes. I have, however, been still more lenient than my pharmaceutical friend, and have allowed five-tenths of a grain. . . We, as analysts, can weigh easily to the one-hundredth part of a grain, and I know that balances used by dispensers for weighing such quantities as 120 grains are capable of turning with the tenth part of a grain if kept in good condition; and I think, under such circumstances, it would be absurd for any one to contend that it is impracticable to weigh drugs within half a grain on these premises. At least, we might add, no balance should excuse a variation of five, ten, or twenty, or even, as in some of the cases given, *sixty* and *eighty* grains."

But inaccuracy is not the only danger, as the following remark, among others, will show:

"No. 18 (from Airdrie) dispensed the chloroform without any spirit, so that it remained insoluble at the bottom of the bottle. This error might have proved serious if the last dose in the bottle containing all the chloroform had been swallowed by the patient."

As we are going to press is announced the death of Dr. Jos. Carson, Emeritus Professor of Pharmacy and Materia Medica in the University of Pennsylvania.

ERRATA.

The following *errata* are herewith corrected in Dr. Allen's article on the Anatomy of the Cerebrum:

For *segmentum* read *tegmentum.*
For *cerbea* read *cortex.*
For *claustruna* read *claustrum.*

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM DECEMBER 17, 1876, TO DECEMBER 30, 1876, INCLUSIVE.

Forwood, W. H., Surgeon.—Assigned to duty at Raleigh, N. C. S. O. 182, Department of the South, December 16, 1876.

Tilton, H. R., Surgeon.—To take post at Cantonment at the mouth of Tongue River, M. T. S. F. O. 46, Headquarters Department of Dakota (in the field), September 11, 1876.

Brown, H. E., Assistant-Surgeon.—When relieved by Assistant-Surgeon Spencer, to comply with orders from A. G. O. in his case. S. O. 182, c. s., Department of the South.

Adair, G. W., Assistant-Surgeon.—Granted leave of absence for one month, with permission to leave limits of Department and apply for an extension of one month. S. O. 225, Department of Texas, December 13, 1876.

Crampton, L. W., Assistant-Surgeon.—On return from leave of absence, to report in person at these Headquarters for assignment. S. O. 247, c. s., Department of the Gulf.

Spencer, W. G., Assistant-Surgeon.—Assigned to duty at Fort Barrancas, Fla. S. O. 182, c. s., Department of the South.

Buell, J. W., Assistant-Surgeon.—Assigned to duty at Columbia, S. C. S. O. 188, Department of the South, December 27, 1876.